

(b) when the first type of aluminum-containing compound is thermally treated aluminum trihydrate, the second type of aluminum-containing compound is selected from the group consisting of other forms of thermally treated aluminum trihydrate, aluminum trihydrate, aluminum sols, aluminum gels, pseudoboehmite, boehmite, aluminum nitrate, aluminum chloride and aluminum chlorohydrate.

24. The process according to claim 23, wherein the first type of aluminum-containing compound is aluminum trihydrate.

25. The process according to claim 23, wherein the first type of aluminum-containing compound is thermally treated aluminum trihydrate.--

REMARKS

Claims 4-5 and 9-25 are pending herein. By this Preliminary Amendment, claims 1-3 are canceled, 4, 5, 9, 12, 14 and 15 are amended and new claims 23-25 are added.

The attached Appendix includes marked-up copies of each rewritten claim (37 C.F.R. §1.121(c)(1)(ii)).

The amendment of claims 4, 5, 9, 12, 14 and 15 and presentation of new claims 23-25 do not raise new matter. Support for new claims 23-25 can also be found in the specification on page 12, lines 10-21, as originally filed. Claims 4, 5, 9, 12, 14 and 15 are amended to maintain proper claim dependencies. Thus, the amendment of claims 4, 5, 9, 12, 14 and 15 and the addition of new claims 23-25 do not introduce new matter.

I. The Claims Define Patentable Subject Matter

Preston, cited on the attached Information Disclosure Statement, discloses the hydrothermal reaction of a magnesium source, alumina trihydrate and an alkali metal aluminate. The present claims are patentable over Preston.

Claim 23 of the present application requires that if the first type of aluminum-containing compound is aluminium trihydrate, the second type of aluminum-containing

compound is selected from the group consisting of aluminum sols, thermally treated aluminum trihydrate, aluminum gels, pseudoboehmite, boehmite, aluminum nitrate, aluminum chloride and aluminum chlorohydrate. Furthermore, claim 16 of the instant application requires one of the aluminum-containing compounds to be thermally treated aluminum trihydrate.

In contrast, Preston fails to disclose either of these recited features. Thus, since none of the claims of the instant application cover the preparation of an anionic clay from a magnesium source and an aluminum source containing aluminum trihydrate and alkaline metal aluminate, the claimed invention is distinguishable from the process disclosed by Preston.

Preston further teaches that "it is critical that the aluminum be present as a mixture of alkaline metal aluminate and solid alumina trihydrate." Thus, Preston teaches away from the claimed invention, which relates to the use of a combination of aluminum trihydrate or its thermally treated form and an aluminum-containing compound other than alkali metal aluminate.

One of ordinary skill in the art reading Preston would not have been motivated to attempt the claimed process since the reference teaches that the use of alkaline metal aluminate is essential. In addition, there would have been no motivation on the part of one of skill in the art to substitute the alkali metal aluminate with any of the aluminum-containing compounds as set forth in claim 1.

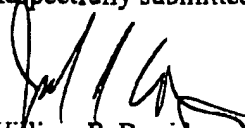
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Thus, for at least these reasons, Applicants submit that the claimed invention is distinguishable over Preston.

Further consideration and prompt allowance of the application are respectfully requested.

Respectfully submitted,


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Attachment:
Appendix

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DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461
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APPENDIX

Claim 1-3 are canceled.

The following are marked-up versions of the amended claims:

4. (Three Times Amended) The process according to claim ~~1~~23, wherein the aluminum source comprises aluminum trihydrate and thermally treated aluminum trihydrate.

5. (Four Times Amended) The process according to claim ~~1~~23, wherein the magnesium source is at least one selected from the group consisting of MgO, Mg(OH)₂ and MgCO₃.

9. (Four Times Amended) The process according to claim ~~1~~23, wherein metals or non-metals are present during the reaction of the aluminum source and magnesium source.

12. (Three Times Amended) The process according to claim ~~1~~23, wherein the anionic clay is subjected to an ion-exchange treatment.

14. (Three Times Amended) The process according to claim ~~1~~23, wherein metals or non-metals are deposited on the anionic clay.

15. (Three Times Amended) The process for the preparation of an Al-Mg-containing solid solution and/or spinel, comprising subjecting an anionic clay obtained by the processes of claim ~~1~~23 to a heat-treatment at a temperature between 300 and 1200°C.